

## Claims

1. Intervertebral disk implant, wherein the joint center of gravity can be varied during a rotational movement and/or bending movement.  
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2. Intervertebral disk implant, wherein travel of the instantaneous center of rotation (ICR) can be performed in the same manner as in the case of a natural vertebral segment.
- 10 3. Intervertebral disk implant according to claim 1 or claim 2, wherein the helical axis (IHA) can travel in the same manner as in the case of a natural vertebral segment.
- 15 4. Intervertebral disk implant according to one of claims 1 to 3, wherein the helical axis (IHA) can travel along a ventral or dorsal bow.
- 20 5. Intervertebral disk implant according to one of claims 1 to 4, comprising a base plate and an intervertebral disk, wherein the intervertebral disk is seated on the base plate in such a way that translational and/or rotational movements are possible.
- 25 6. Intervertebral disk implant according claim 5, wherein the intervertebral disk is seated on the base plate in such a way that translational and rotational movements are possible.
- 30 7. Intervertebral disk implant according to one of claims 1 to 6, further comprising a cover plate, wherein said cover plate is seated on the intervertebral disk in such a manner that the articulating surface of the intervertebral disk as well as the articulating surface of the cover plate are each located on a respective ellipsoid partial surface.
8. Intervertebral disk implant according to claim 7, wherein the ellipsoid partial surface is a spherical partial surface.

9. Intervertebral disk implant according to one of claims 1 to 8, wherein the intervertebral disk consists of polyethylene or titanium or a titanium alloy.
- 5 10. Intervertebral disk implant according to one of claims 1 to 9, wherein the base plate and/or the cover plate can be implanted into the bone or fixed to the bone without cement.
- 10 11. Intervertebral disk implant according to one of claims 1 to 10, wherein the base plate and/or the cover plate consist of titanium or a titanium alloy.
12. Intervertebral disk implant according to one of claims 1 to 11, wherein the base plate and/or the cover plate and/or the intervertebral disk of titanium or titanium alloy is coated with a ceramic coating.
- 15 13. Intervertebral disk implant according to claim 12, wherein the ceramic coating is titanium-niobium-nitride (Ti-Nb-N).
- 20 14. Use of the intervertebral disk implant according to one of claims 1 to 13 for treatment of scoliosis, herniation of intervertebral disk, kyphosis, ruptured disk, black disc, spontaneous deformation, lumbago, spondylosis deformans, age-related hunchback (Witwenbuckel), spondylomyelitis, osteochondrosis, osteofibrosis, spina bifida, lordosis, spondylotosis, clay shoveller's fracture, myelomeningocele, brachialgia, Baastrop's syndrome, vertebral ankylosis, Scheuermann's disease, cervical syndrome, lumbar kyphosis, torticollis, as  
25 well as Bechterew's disease.